

Abstract:

In a process for reducing iron-ore-containing particulate material in at least a two-stage process, reducing gas is conducted through at least two reaction zones consecutively arranged in series and formed by a moving particulate material and the particulate material passes through the reaction zones in reverse order to the reducing gas, with the particulate material being heated in the reaction zone arranged first for the particulate material and being reduced in the further reaction zone.

In order to achieve a maximum preheating temperature without any formation of magnetite, the reducing gas added to the first reaction zone is conditioned such that no or hardly any reduction takes place, although for the particulate material a preheating temperature within the fringe range of starting a reduction is achieved, whereby either the degree of oxidation of the reducing gas is increased or the temperature of the reducing gas is decreased or both measures are carried out jointly and whereby, in the reactor zone arranged second for the iron ore, a temperature level of at least about 600°C, preferably in the range of between 600 and 700°C, in particular of between 620 and 660°C, is adjusted and the iron-oxide-containing material is reduced to wuestite (Fig. 1).